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REPORT TO THE CONGRESS

Need For Strengthening
Management Controls
Over The Procurement Of
Munitions Under Development,
Such As 105-MM Ammunition

Department of Defense

BY THE COMPTROLLER GENERAL OF THE UNITED STATES

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COMPTROLLER GENERAL OF THE UNITED STATES WASHINGTON, D.C. 20548

B-169675

To the President of the Senate and the Speaker of the House of Representatives

This is our report on the need for strengthening management controls over the procurement of munitions under development, such as 105-mm ammunition, by the Department of Defense. Our review was made pursuant to the Budget and Accounting Act, 1921 (31 U.S.C. 53), and the Accounting and Auditing Act of 1950 (31 U.S.C. 67).

Copies of this report are being sent to the Director, Office of Management and Budget; the Secretary of Defense; and the Secretaries of the Army and Navy.

Comptroller General of the United States

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COMPTROLLER GENERAL'S REPORT TO THE CONGRESS

NEED FOR STRENGTHENING MANAGEMENT CONTROLS OVER THE PROCUREMENT OF MUNITIONS UNDER DEVELOPMENT, SUCH AS 105-MM AMMUNITION Department of Defense B-169675

DIGEST

WHY THE REVIEW WAS MADE

During fiscal year 1969 the Army Munitions Command spent \$4.62 billion principally for munitions purchases for the Army and other military services. Because of the substantial funds expended (as well as the effect on the combat readiness of the Army and the Marine Corps), the General Actuating Office (GAO) reviewed the procedures and practices of the Army in authorizing production, purchases, and field use of developmental munitions.

The review was limited to procurement of a specific round of howitzer ammunition having a unit cost of about \$184, because Command officials informed GAO that similar procedures were followed in managing other developmental munitions.

Production and operational use of materiel prior to completing development and testing is referred to as concurrent development and production or concurrency. The concurrency of Army munitions is authorized by a "Limited Production" classification. Procedures require that items so classified be used only for the urgent requirement they are intended to fulfill.

FINDINGS AND CONCLUSIONS

The Army purchased more rounds in developmental status than needed. These rounds had been authorized as "Limited Production" for 1 year, to fill an urgent requirement for close-range, direct-fire capability in Southeast Asia. The item was still in limited production 3-1/2 years later, although authorization from higher echelons had not been obtained.

The actual rate of use of the round in Southeast Asia was far lower than anticipated (see p. 9), but production of 73,000 rounds for the Army was continuing and 134,000 additional rounds had been ordered for the Marine Corps. The quantities ordered for the Army were based on stocking the round where no urgent requirement had been established. (See p. 10.)

GAO found that substantial savings might have been realized had effective action been taken to reduce or cancel the Army's procurement of these rounds for the Marine Corps. (See pp. 9 and 10.) GAO's review showed that the

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Army was in an excess stock position and that about 22,000 rounds could have been transferred to the Marine Corps instead of purchased to meet Marine Corps needs.

GAO believes that this situation arose because of the following weaknesses in the management of "Limited Production" munitions.

- --"Limited Production" munitions were not restricted to procurements for urgent operational requirements, contrary to Army regulations. In this case the requirement was expanded to provide stockage at additional locations (see p. 10), and an attempt was made to redefine the role the round was to fill. (See p. 8.)
- --The developing agency did not submit renewals of the "Limited Production" authorization for annual review, contrary to requirements. (See p. 22.)
- --Army Munitions Command and higher levels of Army management did not have any information concerning the actual type or rate of use of the round by the Marine Corps. (See p. 19.)

GAO believes that Army officials, because of the unproven developmental nature of "Limited Production" items, should review periodically such factors as urgency of need, design suitability, development progress, and quantities needed on the basis of actual experience (see p. 23) and should inform other using services of any limitations or potential hazards involved. (See p. 20.)

RECOMMENDATIONS OR SUGGESTIONS

By letter dated June 26, 1969, GAO suggested to the Secretary of Defense that the Army transfer the excess stock of 22,000 rounds to the Marine Corps and reduce the quantity of rounds being procured for the Marine Corps. In addition, GAO proposed that the Army improve its overall management of munitions development by:

- --reviewing all "Limited Production" munitions (reported by Army Munitions Command officials as being subject to the same procedures as the 105-mm round) controlled by the Command, to determine whether similar problems warranting correction existed (see p. 17);
- --enforcing its regulation requiring that "Limited Production" items be used only for the specific, urgent requirement for which purchases were approved (see p. 17);
- --complying with its requirements for periodic justification by the developing agency, and approval by the Army General Staff, of the need to renew a "Limited Production" authorization (see p. 25); and
- --monitoring the use of developmental items purchased by other customers (see p. 20).

GAO proposed also that the Marine Corps' purchases be reviewed both for economic feasibility of reducing quantities on order by using stock in excess of urgent Army requirements and for the validity of the Marine Corps requirements. (See p. 16.)

AGENCY ACTIONS AND UNRESOLVED ISSUES

The Assistant Secretary of Defense (Installations and Logistics) did not agree that the Army was in an excess stock position. He stated that action had been taken to transfer to the Army 22,500 rounds, valued at about \$4 million, that were excess to the Marine Corps requirements. GAO noted that the Army's projected deficit of 22,500 rounds had been based on other than Southeast Asia requirements.

The Assistant Secretary stated also that action had been taken to:

- --issue revised regulations strengthening and clarifying procedures for managing "Limited Production" items and
- --restrict severely amounts budgeted for procurement of "Limited Production" items. (See p. 32.)

The Assistant Secretary disagreed with GAO's suggestion that the Army monitor the use of developmental items purchased for other customers. The Assistant Secretary stated that the Army had a monitoring responsibility only when a safety risk was involved. The new Army Regulation 71-6, dated January 1, 1970, however. does not mention this responsibility.

Therefore GAO is recommending that the Secretary of the Army revise Army Regulation 71-6 to reflect the responsibility of the Army to maintain cognizance of the use of developmental items in instances involving potential safety risk.

MATTERS FOR CONSIDERATION BY THE CONGRESS

This report is being submitted to the Congress because of expressed congressional interest in concurrent development and production of material by the military services and in the reduction of unwarranted defense expenditures.

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	<u>ABBREVIATIONS</u>	
GAO	General Accounting Office	
LP	limited production	
MUCOM	Munitions Command	•

COMPTROLLER GENERAL'S REPORT TO THE CONGRESS NEED FOR STRENGTHENING MANAGEMENT CONTROLS OVER THE PROCUREMENT OF MUNITIONS UNDER DEVELOPMENT, SUCH AS 105-MM AMMUNITION Department of Defense B-169675

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CHAPTER I

INTRODUCTION

The General Accounting Office has reviewed the Army procedures and practices relating to the production authorization and deployment of developmental munitions. The production and operational use of material prior to completion of its development and testing is commonly referred to as concurrent development and production, or simply concurrency. In the Army concurrency is authorized by a "Limited Production" (LP) classification action.

Our review was directed toward (1) an evaluation of the policies and procedures established for the management of munitions material classified LP and (2) a determination as to whether actual practices conformed to the stated policies and procedures. Since munitions material is developed and procured by the Army for both the Army and the Marine Corps, our review was conducted primarily at the Army Munitions Command (MUCOM), Dover, New Jersey.

MUCOM, a subordinate of the Army Materiel Command, has the responsibility within the Army of managing the research, development, procurement, and supply of munitions items. These activities are performed by subordinate installations of MUCOM, such as Picatinny Arsenal at Dover and Frankford Arsenal, at Philadelphia, Pennsylvania.

MUCOM's responsibilities and implementing actions are important not only because of their effect on the combat readiness of the Army and the Marine Corps but also because of the substantial funds expended. During fiscal year 1969, MUCOM's subordinate installations spent \$4.62 billion on their various activities, principally for the purchase of munitions. Although expenditures for the research and development activities are a relatively small portion (\$159 million) of the total expenditures, they are important because these activities involve design drawings and data supplied for most of the production contracts awarded each year by the Army for munitions.

During fiscal year 1969 49 LP items managed by MUCOM were being concurrently developed and produced. In testing MUCOM's performance in this area, we selected an ammunition round for a 105-mm howitzer for an in-depth examination. The examination was limited to this item because MUCOM officials informed us that similar management practices were followed regarding other LP items.

Under normal circumstances, newly developed materiel is procured by the Army after tests have shown that it is suitable for Army use. It is then type-classified "Standard A," adopted into the Army supply system, and approved for full production. This type-classification (or standardization) action serves to obtain and record Department of the Army decisions on the current status of the materiel relative to the Army supply system and to facilitate planning for orderly and economical phasing of the item into the supply system.

In exceptional cases, an item may be type-classified as LP and procured prior to completion of development and/or test, provided that an urgent operational requirement exists that the item appears to fulfill and for which no existing item is adequate. The item must be promising enough operationally to warrant initiating limited procurement or production for troop issue prior to completion of development. This procedure involves expedited development under high-risk conditions.

No specific amount of testing is required before an item can be type-classified as LP. Army regulations, however, require that the LP request contain a statement of the type and extent of testing conducted on the item and the extent of further testing necessary and an indication of the degree of confidence that the item will successfully complete development. In the case of munitions, LP items must be

Because of security retrictions, this report does not include a complete identification or description of the item selected for our review; however, we have furnished Army and Marine Corps officials with complete information regarding the item we reviewed.

regarded as entailing a greater safety risk than munitions that have been completely tested. Initial LP procurement and subsequent renewals are authorized only in the quantities and for the purposes approved by the responsible element of the Army General Staff.

With regard to the management of LP materiel, the Army Audit Agency, in a report of audit issued February 13, 1970, entitled "The U.S. Army Materiel Command's Research and Development Program," stated that it had found that LP items had been procured although the items were not urgently needed and that the quantities procured had been far in excess of urgent requirements. These deficiencies are similar to those found in our review reported to the Secretary of Defense by letter dated June 26, 1969. The Audit Agency's recommendations for better type-classification procedures and more stringent controls were implemented by the Department of the Army through the issuance of Army Regulation 71-6, effective January 1, 1970, which superseded Army Regulation 700-20.

Currently the Assistant Chief of Staff for Force Development.

CHAPTER 2

DEVELOPMENT AND PROCUREMENT OF

LIMITED PRODUCTION ITEMS FOR THE ARMY AND MARINE CORPS

An LP item, as defined by Army Regulation 700-20, is one which has not been adopted as suitable for general Army use but which is considered to be promising enough to satisfy a specific urgent operational requirement for which no other existing item is adequate. An LP item is developed and produced for issue on a concurrent basis wherein production, and often operational use, is achieved prior to the completion of development and testing. Initial LP procurement actions and subsequent renewals are to be authorized by the responsible organizational element of the Army General Staff only for the urgent operational requirement and in the quantities approved for that operational requirement.

URGENT REQUIREMENT FOR A ROUND IN DIRECT FIRE

In October 1965, the howitzer round selected for review was formally approved as an LP item and 10,000 rounds were authorized for procurement. The specific urgent requirement was identified as direct fire (not to be fired over friendly troops) by the Army in defense of its artillery positions in Vietnam against enemy troops. At that time, MUCOM planned to complete the development of the round by June 30, 1966. A chronology of events following the LP type-classification of the round is included as appendix I.

In October 1965, Army combat forces in Vietnam estimated, without benefit of experience, that the monthly concumption of this round would average 7,710 rounds. MUCOM, the agency responsible for establishing the procurement program, recommended an LP increase of 117,000 rounds;

An adopted item is one which is classified "Standard A" and which is subject to full production for worldwide operational use.

however, the records supporting this computation were not available at MUCOM.

In May 1966, an Army procurement of 63,000 additional rounds (above the original 10,000) was programmed, without benefit of any field experience, by the Deputy Chief of Staff for Logistics. The records do not indicate that the increase in LP procurement was submitted to or approved by the Chief of Research and Development who was then the responsible organizational element of the Army General Staff.

EXPANSION OF ROLE TO INDIRECT FIRE

Army field units reported in June 1966 that, although these LP rounds had been available from December 1965, none had been used in combat because of the lack of enemy direct-fire targets. The absence of direct-fire targets was again reported by field units in October 1966. MUCOM then attempted to increase the operational capability of the round by adding an indirect-fire role. The urgent requirement justifying LP procurement of this round, however, had been based on a direct-fire role only. We found no evidence that MUCOM had obtained the approval of the Army General Staff for the expanded operational role of the LP round.

Limited firing tests made from April to June 1967 disclosed that the round was inaccurate and ineffective in an indirect-fire role. By June 1967, contract awards had been completed for the 63,000 additional rounds. In July 1967, the Assistant Chief of Staff for Force Development reaffirmed the restriction on the rounds' role to a direct-fire role.

USAGE RATES

In August 1967, the Army's Pacific Command reported that its combat forces in Vietnam had used only 42 rounds against the enemy in direct fire during the entire fiscal year 1967, although about 9,000 rounds had been issued to the combat forces during that period. Subsequently, the usage rate upon which the initial monthly estimate had been based was reduced about 98 percent from one round to 0.025 round a day for each weapon.

MUCOM records show that by August 1967 about 51,000 of the total of 73,000 rounds purchased were still undelivered. On September 14,1967, the Army Audit Agency recommended the full or partial termination of the production contracts, because the usage rate of the round was lower than anticipated and because the round was unsuitable for an indirect-fire role.

A MUCOM statement to Headquarters, Army Materiel Command, on September 25, 1967, said, however, that termination was not favorably considered because (1) the round could be modified for use in an indirect-fire role and thereby increase the future quantitative requirements, (2) the initial parts producers were scheduled to complete production by February 1968 so that savings would be small if production were halted, and (3) it was desirable to keep the production lines in operation because it was expensive to restart production after a full halt.

According to the Army Audit Agency's final report of May 3, 1968, 42,000 of the approximately 51,000 undelivered rounds (as of September 1967) were for indirect-fire-role requirements.

The Army Materiel Command concurred with this MUCOM decision. In May 1968, however, Army Materiel Command decided that the round should not be modified for an indirect-fire capability because this capability was not required. Further, the Army Materiel Command directed that completion of development of the round be based upon direct fire only.

As of June 1968, about 13,000 rounds were in depot storage and about 45,000 rounds were still undelivered.

MUCOM, however, did not take any action to terminate the undelivered quantity. Instead, in August 1968 contracts were awarded for 60,000 additional rounds for the Marine Corps.

POTENTIAL SAVINGS

In November 1968, we suggested to MUCOM officials that (1) there was a substantial quantity of rounds excess to the Army's needs and (2) this excess could be used to reduce the quantity on order for the Marine Corps. MUCOM disagreed with our suggestion and in November 1968 prepared a computation of its requirements through December 1969 that indicated that the Army was not in an excess stock position.

We questioned certain procedures used by MUCOM in computing these requirements through December 1969, which, in our opinion, resulted in an overstatement of about 22,000 rounds valued at approximately \$4 million. The main reason for the overstatement was that the rounds being procured were being used to meet a worldwide Army stockage objective in addition to meeting the requirements for Vietnam.

We found no evidence that MUCOM had requested or received approval by the Army General Staff for the LP procurement to be stocked or used in locations other than Southeast Asia. Also we found no urgent requirement approved by the Army General Staff for a worldwide use of this round. In a discussion with representatives of the Deputy Chief of Staff for Logistics, it was pointed out that the Army had included a worldwide stockage objective for the round in August 1965 because type-classification of the round as Standard A was planned for 1966. Even though the round did not meet this development schedule (type-classification as Standard A is currently planned for the third quarter of fiscal year 1972), the worldwide stockage objective was not canceled.

MUCOM officials told us that, except for quantity requirements, there were no restrictions on stockage or use of a development item that had been classified LP and that consequently there was no need to obtain approval by the Army General Staff.

In our opinion, Army Regulation 700-20 restricts the stockage or use of an LP item to the specific urgent operational requirement for which it was authorized. We believe that this restriction is necessary to prevent the uncontrolled distribution of development material in the Army supply system, particularly when the development material is potentially hazardous, as are munitions.

DISCUSSION WITH ARMY OFFICIALS

We discussed this matter with representatives of the Assistant Chief of Staff for Force Development; the Chief of Research and Development; the Deputy Chief of Staff for Logistics; and Headquarters, Army Materiel Command, in a meeting in Washington, D.C., on February 7, 1969. A MUCOM representative also attended this meeting.

The representative of the Assistant Chief of Staff for Force Development concurred that an LP item was to be used only to satisfy the specific requirement for which the authorization was granted. He did not comment, however, on the possible application of about \$4 million worth of excess Army stock to satisfy part of the current Marine Corps requirement. On the other hand representatives from the Office of the Deputy Chief of Staff for Logistics supported MUCOM's contention that existing stock could be used for purposes other than those specifically approved by the responsible element of the Army General Staff. These officials did not agree that, in this case, excess Army stock was available for possible reduction in the quantities on order for the Marine Corps.

The Assistant Chief of Staff for Force Development, by letter dated April 7, 1969, confirmed the statement of the representative of his office at the February 7, 1969, meeting. The letter stated that:

"LP type classification can be approved for the procurement of a development item for world-wide use if this item meets an urgent world-wide requirement, but world-wide deployment is not the usual action."

As previously stated (see p. 10) no urgent requirement was approved by the Army General Staff for the howitzer round on a worldwide basis.

The letter stated also that, to clarify matters with MUCOM as well as with other Army commands, a message had been sent to provide a better basis for monitoring the status and performance of items type-classified LP.

MARINE CORPS PROCUREMENTS

Our review showed that, as of June 1969, contracts had been awarded for a total of about 134,000 rounds for the Marine Corps, including the 60,000 rounds ordered in August 1968. (See p. 10.) Officials at the Marine Corps Liaison Office located at MUCOM stated that, during calendar years 1967 and 1968, the average monthly consumption rate was about 500 rounds. On the basis of this limited-consumption data, the Marine Corps, in our opinion, had rounds excess to its needs.

AGENCY COMMENTS AND GAO EVALUATION

In a letter to the Secretary of Defense on June 26, 1969, we proposed a series of actions which, we felt, would contribute to improved management in the procurement, production, and use of LP items. The Assistant Secretary of Defense (Installations and Logistics) replied on October 21, 1969. The reply is included as appendix II.

With regard to our opinion that the Army was in an excess stock position for the round, the Assistant Secretary stated:

"We do not find this to be correct. Based on the latest computations the Army projects a deficit of 22,000 rounds through the FY [fiscal year] 1970 production lead time and has recently taken action to have this quantity transferred from the Marine Corps who are now in a projected overage position of about 10,000 rounds." (See p. 1 of app. II.)

The basis for the computation of the Army's projected deficit of 22,000 rounds was not stated; however, documents furnished by the Army showed that the computation was based on supplying the rounds to other locations in addition to meeting Southeast Asia requirements. In fact a high percentage of the rounds are for locations other than Southeast Asia. These locations had been approved after the procurement of the rounds by the Army Chief of Staff. As of June 30, 1970, about 20 percent of the Army's inventory of the round was limited to Southeast Asia.

Representatives of the Deputy Chief of Staff for Logistics informed us in September 1970 that the round was excess to the Army's needs at the time this excess was first brought to their attention. They stated, however, that the use of the round in Southeast Asia had increased subsequently. They were unaware of the reasons for the increase but stated that in Southeast Asia a number of rounds are unpacked and placed near the weapons so that they are readily available in case of an enemy attack. They stated also that, in accordance with Army policy, the round is to be destroyed if it has been unpackaged for 120 days. Records, however, are not kept at either the Headquarters,

Department of the Army, or the local level as to the number of rounds which have been fired for effect or destruction.

The reply further stated, in part, that,

"It is alleged that MUCOM unilaterally expanded the operational role for this round of ammunition to include indirect fire because of the limited usage being experienced in the direct fire mode. This allegation is not borne out by fact. The Qualitative Materiel Requirement (QMR) 1 for the *** round, which was established prior to February 1956, and updated on 29 August 1958 and 12 July 1962, authorizes development for direct and indirect fire role. This requirement is contained in paragraph 438(d)(1) Combat Development Objectives Guide (CDOG) ***. When tests revealed that deficiencies in the item warranted discontinuance of development for indirect fire, the Army staff directed that future developmental efforts should concentrate on the *** [round] in its direct fire capability ***." (See p. 1 app. II.)

Although it is true that the paragraph of the Combat Development Objectives Guide referred to in the Assistant Secretary's reply does state that the round should be developed to meet both a direct-fire and an indirect-fire role, the crux of the matter is that the authorization for the LP action was based on an urgent requirement for the round in a direct-fire role. MUCOM's actions to include development for an indirect-fire role were well within the scope of the objectives guide. The continued procurements of the round, based on an indirect-fire role and/or an

A Department of the Army-approved statement of the military need for a new item of which the economic, technical, and operational feasibility has been determined.

²The Combat Development Objectives Guide is a listing, in general terms, of approved objectives that provides guidance for the research and development program.

expanded stockage objective, however, were not within the scope of the urgent requirement.

We have no argument with the continued procurements of the round if they were to fulfill the urgent requirement for a direct-fire round for use in Southeast Asia. The continued procurements for an indirect-fire role and an expanded stockage objective, however, do not seem justified, since there is no stated urgent requirement for the round on this basis.

As of January 1970 we found that no document authorizing engineering development of the round had been approved. Therefore any engineering development work on the round was carried out without an authorizing document. The development appears to have been done in answer to the cited paragraph in the Combat Development Objectives Guide, a document never intended to describe specific operating characteristics to be achieved by engineering development. It seems likely that a good deal of the confusion over whether the round was to have an indirect-fire capability could have been avoided if a requirements document had been approved to guide engineering development, as provided by Army regulations.

The reply states further, in part, that:

"As you indicate in your letter, no action was taken to terminate the undelivered quantities in August 1967. However, this was not due to poor or unenlightened management, as implied. At that time it was determined that cancellation would have incurred excessive termination charges. This advice was passed on to the Army staff who concurred in continuation considering that this ammunition was still suitable for direct fire and it was more reasonable to procure for this purpose than to terminate." (See p. 2 of app. II.)

¹Engineering development is the final stage of the development process and includes those development projects being engineered for military service use that have not yet been approved for procurement or operation.

This termination had been considered by the Army in 1967, because the Army Audit Agency in its "Vertical Audit of the 81mm and 105mm Ammunitions Programs" had discovered this situation and, on September 14, 1967, had recommended full or partial termination. Our proposal to terminate, however, dealt with the situation more than a year later. As shown in appendix I, contracts had been awarded in August 1968 for 60,000 additional rounds for the Marine Corps. Consequently, when we made our proposal of termination to MUCOM in November 1968, it was unlikely that cancellations of these contracts would have necessitated excessive termination charges. Furthermore, when we brought our proposal for termination to the attention of the Secretary of Defense in June 1969, contracts for a total of about 134,000 rounds for the Marine Corps had been awarded. Termination at the times we proposed would have been logical if the Army had limited the procurement of the round to the quantities necessary to meet the urgent requirement rather than a worldwide deployment objective.

 In our June 26, 1969, letter to the Secretary of Defense, we proposed that the Marine Corps procurement be reviewed in terms of the economic feasibility of reducing quantities on order by using Army stock in excess of urgent Army requirements and by validating Marine Corps requirements.

In his reply the Assistant Secretary stated, in part, that:

"The Marine Corps procurement of the *** [round] has been reviewed and determination made that although somewhat over currently projected needs costs for termination do not justify cancellation of contracts. Transfer of 22,500 rounds from Marine Corps to Army to meet projected Army needs is currently in progress." (See p. 3 of app. II.)

As stated previously, we feel that the Army had not shown that the costs of termination would have offset the savings that could have been achieved by cancellation or reduction of the contracts. In view of the passage of time, however, we feel that it is unlikely that such savings can now be achieved.

Our review showed that the Marine Corps, as of June 30, 1970, had transferred 14,400 rounds to the Army. Our review showed also that the Marine Corps, as of June 30, 1970, had a total of 57,400 rounds on hand and 40,000 rounds on order, of which 8,000 were to be transferred to the Army. We believe that, since the Marine Corps' projected needs are 6,400 rounds a year, the Marine Corps still is an excess quantity on hand.

2. In our June 26, 1969, letter, we proposed also that e Army consider the need for the initiation of a view of all LP items under MJCOM's control to effect such additional savings as might be warranted, since MUCOM officials had indicated that similar management practices had been followed regarding other LP items.

The reply states:

"Although review of LP procurement and production is a continuing effort, special attention is being given to this area. All involved echelons of the Army are conducting a special review and findings will be discussed with the OSD [Office of the Secret: y of Defense] staff." (See p. 3 of app. II.)

3. In our letter we proposed further that the Army comply with Army Regulation 700-20 to ensure that LP items were used for only the specific urgent requirement for which the procurement was approved.

The reply states:

"Your recommendations for strengthening and clarifying LP procedures are considered valid. We believe that the actions which have been taken already, and those which are planned in the near future, will serve to significantly improve the management of LP items. All items in this category will continue to receive detailed evaluation by my staff." (See p. 3 of app. II.)

Here again corrective actions taken should result in improved conduct of LP procurement and production, and we intend to examine into the effectiveness of these actions in the future.

CHAPTER 3

PROCUREMENT OF LIMITED PRODUCTION ITEMS

FOR OTHER CUSTOMERS

Army Regulation 700-20 states that an LP item may be purchased by the Army for other customers, provided that the purpose, quantity, and customer involved are approved by the Army General Staff. This procedure is intended to protect the customer in the use of developmental munitions material with its inherent hazard by preventing the uncontrolled distribution of developmental munitions material. We found no evidence that MUCOM and higher levels of Army management had any information concerning the actual type or rate of use of the round by the Marine Corps.

MUCOM officials advised us that they neither validated the purpose and quantity of the Marine Corps procurements nor submitted such requirements to the Army General Staff for approval, because MUCOM did not have the authority to regulate or control the procurement and use of LP items purchased for other customers, such as the Marine Corps.

DISCUSSION WITH ARMY OFFICIALS

Notwithstanding the provisions of Army Regulation 700-20 regarding approval by the Army General Staff before LP procurements are made for other customers, the various Army officials present at the conference held on February 7, 1969 (see p. 19), told us that the Army's sole concern was whether adequate funds were furnished to make the procurements. They also told us that the Army did not have the authority to regulate or control the use of items purchased for other customers, even though the items were developmental.

We believe that the Marine Corps requirement should have been submitted for approval by the Army General Staff in accordance with Army Regulation 700-20. (See above) In addition, since development of the round has not been completed and since suitability for Army-wide use has not been established, it appears that the Army, as the

developing service, has the responsibility for advising the Marine Corps as to the potential hazards involved and for utilizing the other customers' experience in assessing the progress of development of the item.

AGENCY COMMENTS AND GAO EVALUATION

In response to our June 1969 letter, the Assistant Secretary of Defense, in his reply of October 21, 1969, stated that:

"Although contained in AR [Army Regulation] 700-20 the Army cannot have such authority over another Service's actions and to that extent the AR is incorrect. Requirements that affect the execution of Marine Corps missions should not, and cannot, be validated by the Army who does not have any responsibility for execution of these missions." (See p. 2 of app. II.)

We agree that the Army does not have any responsibility for execution of Marine Corps missions. The relationship between MUCOM and the other services need not be one of validating the method of mission execution but merely one of exchanging information on the use and performance of the round.

We believe that MUCOM, to accomplish this, should be advised as to the type and rate of use, by other services, of items which had been developed by MUCOM so that MUCOM (1) may advise the other services of situations where use is unsafe or otherwise inadvisable, such as may be the case with developmental munitions and (2) may utilize such data in directing the development of the item. The advice should be on a continuing basis so that any new information from either the developing agency or the using service is made available to the other.

Therefore in our letter of June 1969 we proposed that MUCOM be required to monitor the use of developmental items purchased for other customers.

The Assistant Secretary's reply stated that:

"The recommendation that MUCOM be required to monitor the use of development items purchased for other customers is not favorably considered. As discussed earlier, the use of an item, developmental or standard, is the prerogative of the using service." (See p. 3 of app. II.)

We believe that MUCOM should be advised on the use of developmental munitions items to the extent of receiving reports on the types and rates of use of the items so that a continuing flow of information may exist between the developing agencies and the using services which would permit MUCOM to render advice that might not otherwise be available on potentially hazardous material and which would also inform MUCOM of how the material performs under actual use.

The Assistant Secretary in his reply stated that:

"The Army has a monitoring responsibility only when a safety risk is involved." (See p. 2 of app. II.)

This is precisely what our recommendation is intended to cover, since we feel that a safety risk is inherently involved in the case of developmental munitions. The new Army Regulation 71-6 (which replaced 700-20 on January 1, 1970), however, does not reflect the Assistant Secretary's statement in that there is no mention of Army responsibility even where a safety risk is involved.

RECOMMENDATION

We recommend that the Secretary of the Army revise Army Regulation 71-6 to reflect the responsibility of the Army to maintain cognizance of the use of developmental items involving potential safety risk.

CHAPTER 4

REVALIDATION AND EXTENSION OF

LIMITED PRODUCTION AUTHORIZATIONS FOR THE ARMY

Army Regulation 700-20 restricts LP authorizations to exceptional cases for which urgent operational requirements are approved by the Army General Staff. The LP authorization is valid for a period of 1 year; however, it may be valid for 2 years for major items having long production lead times. Prior to the expiration of the LP period, the developing agency is required to recommend to the Army General Staff that it (1) adopt the item as suitable for Army-wide use, (2) terminate development and dispose of existing stock, or (3) renew the LP authorization. Renewal of an LP authorization is permitted only in exceptional cases and must be supported by detailed justification relating to some event that could not be anticipated at the time of the original LP authorization.

In October 1965, the round was formally approved as an LP item for a 1-year period. In April 1969, 3-1/2 years later, the item was still in an LP status. We found no evidence that justification for renewal of the LP authorization had been submitted by MUCOM to the responsible organizational element of the Army General Staff for approval, despite the regulatory requirement for annual review and approval by this element and despite the following events which, we believe, particularly warranted this review and approval.

- 1. Development of the round was not completed by June 1966 as scheduled at the time of the original October 1965 LP authorization. This estimate for completion had been revised several times, and as of April 1969 the development completion date was shown in MUCOM's records as being "indeterminable."
- 2. The actual Army usage experience in the field with the round was substantially less than anticipated. (See p. 8.)

MUCOM officials advised us that it was their general practice to request LP renewals only if the authorized

quantity is not placed on contract during the period of the LP authorization. They stated that the Army regulation presumes delivery and consumption of the LP quantity within the authorization period and that this was unrealistic with respect to ammunition. MUCOM officials told us that they would continue their current practice, unless directed otherwise by higher Army authority.

We believe that, because of the unproven developmental nature of the LP items, good management practice dictates that responsible Army officials periodically review such factors as urgency of need, design suitability, development progress, and quantities required on the basis of actual experience. The need for such reviews is recognized in Army Regulation 700-20 which directs the developing agency to periodically justify to the responsible element of the Army General Staff the need to continue the item in an LP status.

At the conference held on February 7, 1969 (see p. 11), the various Army officials concurred that MUCOM had an incorrect understanding of the effective period of an LP authorization. No position was stated at the time, however, regarding the corrective actions to be taken.

The Assistant Secretary of Defense, in his reply of October 21, 1969, stated, in part that:

"The Army staff and the Army Materiel Command (AMC) have issued new directives to define conditions for LP renewals. As you noted, some clarification of the bases for renewal were required. On 12 March 1969 DA [Department of the Army] forwarded a message to major Army commands to clarify and strenghten LP procedures ***. On 28 April 1969 and 2 May 1969, AMC policies and procedures were clarified ***. To further strengthen LP justifications and requests, proposals for LP now require the signature of a general officer ***.

"Recognizing that the current AR [Army Regulation] 700-20 requires some strengthening the Army is preparing a complete revision which will be published as AR 71-6." (See p. 34 of app. II.)

Army Regulation 71-6 was issued on January 1, 1970. We have reviewed it, and we believe that it provides for considerable strengthening of the management controls over authorization of LP developmental material. We believe that, if the regulation is properly implemented, improvement in the management of LP items will result.

AGENCY COMMENTS AND GAO EVALUATION

The reply by the Assistant Secretary of Defense stated, in part, that:

"At the outset let me assure you that we share your concern in the procurement of limited production items. In our staff reviews of the procurement programs the justification for LP are [sic] carefully scrutinized to determine whether they meet urgent criteria. *** In our most recent review of the FY [fiscal year] 1970 budget, severe restrictions were placed on procurement of such items." (See p. 1 of app. II.)

The reply went on to say:

"The efforts of your staff in this review are to be commended. They have focused on an area that has always merited careful scrutiny which has not always been apparent. We believe that we now have attention focused on LP items at all echelons of management. With this increased attention and the indicated strengthening of procedures we believe that any errors of commission in the past should be avoided or, at the least minimized." (See p. 4 of app. II.)

In reply to our statement that we found no evidence that there had been annual renewal of the LP authorizations, although such renewals were required by regulations, the Assistant Secretary of Defense stated, in part, that:

"The requirements for renewal were submitted and approved by the Army staff each year as required with the exception of the last Marine Corps buy." (See p. 3 of app. I.)

Documentation furnished by the Office of the Assistant Secretary of Defense (Installations and Logistics) on December 4, 1969, in support of the Assistant Secretary's reply did not substantiate that the LP renewals had been properly authorized on a yearly basis as required by the theneffective Army Regulation 700-20. In fact, the Assistant Secretary's reply refers only to the occasional procurement actions approved by the Army staff and not to the required annual renewals of the authority to continue production prior to completion of development and/or test. As stated above, MUCOM officials advised us that it was not their practice to request an LP renewal except when the authorized quantity was not placed on contract during the period of the LP authorization.

In our June 1969 letter, we proposed that the Army comply with Army Regulation 700-20 requirements for periodic justification by the developing agency and for approval by the Army General Staff of the need to renew an LP authorization. The reply stated that steps had been taken to improve this aspect of the management of LP items. (See p. 23.) We plan to examine into the effect of these changes in future reviews of this area.

CHAPTER 5

SCOPE OF REVIEW

Our review was performed principally at Headquarters, Army Munitions Command, Dover, New Jersey. We reviewed the regulations of the Department of the Army, the Army Materiel Command, and the Army Munitions Command regarding the management of certain phases of the concurrent development, production, and operational use of developmental munitions. We also discussed this matter with representatives of the Army Chief of Staff for Force Development; Headquarters, Army Materiel Command; the Deputy Chief of Staff for Logistics; the office of the Chief of Research and Development; and the Marine Corps Liaison Office at the Army Munitions Command.

Our review was confined to a round for a 105-mm howitzer, because MUCOM officials informed us that similar management practices were being followed regarding other LP munitions items.

APPENDIXES

MISSING PAGIS

CHRONOLOGY OF EVENTS FOLLOWING THE

AUTHORIZATION FOR LIMITED PRODUCTION

OF A 105-MM HOWITZER ROUND

Oct.	1965	The round was approved as an LP item, and 10,000 rounds were authorized for procurement. Estimated usage was 7,710 rounds a month.
Dec.	1965	Rounds became available to Army field units.
May	1966	Army programmed 63,000 additional rounds for procurement.
June	1966	MUCOM originally (October 1965) planned to complete development of the round by this date.
June	1966	Army field units reported that no rounds had been used in combat because of lack of direct-fire (short-range) targets, although the round had been available from December 1965.
Oct.	1966	Army field units again reported a lack of direct-fire targets for the round, so MUCOM tried to increase the round's operational capability by adding a long-range (indirect-fire) role.
Apr. 196	to June 7	Tests disclosed that the round was inaccurate and ineffective in a long-range role.
June	1967	Contract awards completed for the 63,000 additional rounds for the Army.
July	1967	The Assistant Chief of Staff for Force Development affirms the restriction of the round's use to close-range fire.
Aug.	1967	The Army Pacific Command reported that its combat forces had used only 42 rounds against the enemy in fiscal year 1967.

APPENI	DIX I	
Aug.	•	About 51,000 of the total 73,000 rounds purchased were undelivered.
Sept.	1967	The Army Audit Agency recommended full or partial termination of production contracts because of low usage of the round. MUCOM rejected the recommendation because it felt that it would be too expensive to terminate and because the role of the round could be converted to a long-range role.
May	1968	The Army Materiel Command decided that the round should not be modified for a long-range-fire role.
June	1968	About 45,000 rounds of the Army's procurement were still undelivered.
Aug.	1968	Contracts awarded for 60,000 additional rounds for the Marine Corps.
Nov.	1968	GAO suggested to MUCOM officials that the Army was in an excess stock position and that the excess could be used to reduce the quantity on order. MUCOM disagreed, stating that the Army was not in an excess stock position.
Feb.	1969	Meeting between representatives from GAO and Army in which GAO findings were discussed.
June	1969	GAO forwarded a letter to the Secretary of

- Defense proposing (1) that a series of ac
 - tions be taken to improve management of LP items, (2) that excess Army stock be transferred to the Marine Corps, and (3) that the Marine Corps requirement be reviewed.
- Contracts for a total of about 134,000 rounds June 1969 had been awarded for the Marine Corps.
- The Assistant Secretary of Defense replied to Oct. 1969 GAO's letter of June 26, 1969, by stating that he agreed, in general, with GAO's suggestions with regard to management procedures

and that the Marine Corps stock had been reviewed and found to be excess. He did not agree, however, that the Army was in an excess stock position. He stated that 22,000 rounds were being transferred from the Marine Corps to the Army.

- June 1970 The Army had on hand 31,100 rounds with 12,400 due, primarily from the Marine Corps. The Marine Corps had on hand 57,400 rounds, and 40,000 additional rounds were undelivered.
- July 1970 GAO requested and received information from the Army and the Marine Corps on current stockage and amounts on order. GAO requested additional information from the services.
- Sept. 1970 GAO received additional information on the use and disposition of the round from the Army and the Marine Corps.



ASSISTANT SECRETARY OF DEFENSE WASHINGTON, D.C. 20001

MISTALIATIONS AND LOGISTICS

21 OCT 1969

Mr. C. M. Bailey
Director, Defense Division
U. S. General Accounting Office
441 G Street, N. W.
Washington, D. C. 20548

Dear Mr. Bailey:

This letter is in response to your letter of June 26, 1969, which provided your findings and recommendations regarding the Army Munitions Command's (MUCOM) procedures and practices relating to the management of research and development limited production (LP) type items (OSD Case #2964). We are providing comments on the discussion portion of your letter as well as your recommendations.

At the outset let me assure you that we share your concern in the procurement of limited production items. In our staff reviews of the procurement programs the justification for LP are carefully scrutinized to determine whether they meet urgent criteria. Periodic review is also made of the items while in production. In our most recent review of the FY 1970 budget, severe restrictions were placed on procurement of such items.

On the first page of your letter you indicated that the Army is in an excess stock position for the item in question, the [***] round for the 105mm Howitzer. We do not find this to be correct. Based on the latest computations the Army projects a deficit of 22,000 rounds through the FY 1970 production lead time and has recently taken action to have this quantity transferred from the Marine Corps who are now in a projected overage position of about 10,000 rounds.

It is alleged that MUCCM unilaterally expanded the operational role for this round of ammunition to include indirect fire because of the limited usage being experienced in the direct fire mode. This allegation is not borne out by fact. The Qualitative Materiel requirement (QMR) for the [***] round, which was established prior to February 1956, and updated on 29 August 1958 and 12 July 1962, authorizes development for direct and indirect fire role. This requirement is contained in paragraph 438(d)(1) Combat Development

1 GAO note: The exact name of the round is classified.

Objectives Guide (CDOG) (Atch #1). When tests revealed that deficiencies in the item warranted discontinuance of development for indirect fire, the Army staff directed that future developmental efforts should concentrate on the [***] in its direct fire capability (Atch #2).

As you indicate in your letter, no action was taken to terminate the undelivered quantities in August 1967. However, this was not due to poor or unenlightened management, as implied. At that time it was determined that cancellation would have incurred excessive termination charges. This advice was passed on to the Army staff who concurred in continuation considering that this ammunition was still suitable for direct fire and it was more reasonable to procure for this purpos? than to terminate.

A major allegation in your letter concerns the Army's dereliction in not overseeing the Marine Corps requirements and usage of the [***]lround. Although contained in AR 700-20 the Army cannot have such authority over another Service's actions and to that extent the AR is incorrect. Requirements that affect the execution of Marine Corps missions should not, and cannot, be validated by the Army who does not have any responsibility for execution of these missions. The Army has a monitoring responsibility only when a safety risk is involved. They have no responsibility for Marine Corps requirements or usage. This has been recognized by the Army in the preparation of the proposed AR 71-6 to supercede AR 700-20, which will state:

"Additional quantities of items type classified LP may be procured for non-Army customers without prior approval of Hq DA (ACSFOR) provided that customer funds are made available prior to execution of the contract. Requests will be referred to Hq DA for approval only when procurement of the quantities will endanger Army production/ development schedules or when the customer requests execution of an Interservice Support Agreement."

The justification for the procurement of the item is required when the Service submits its budget requirement to the OSD staff for evaluation. At that time the need is considered on its merits and appraisal of the available facts.

For the record, the procurement of 60,000 rounds for the Marine Corps was approved by the Army staff in August 1968. (Atch #3) In your letter you stated that this buy did not have Army staff approval.

On page 5 of your letter it was stated that no evidence was available that the request for renewal of LP authorization had been submitted to the Army staff as required in Army regulations.

¹See GAO note on p. 32.

The requirements for renewal were submitted and approved by the Army staff each year as required with the exception of the last Marine Corps buy.

- (1) Initial quantity of 10,000 rounds was approved in October 1965.
- (2) An additional quantity of 63,000 rounds was approved in May 1966.
- (3) A quantity of 60,000 rounds was approved for USMC use in August 1968.

The Army staff and the Army Materiel Command (AMC) have issued new directives to define conditions for LP renewals. As you noted, some clarification of the bases for renewal were required. On 12 March 1969 DA forwarded a message to major Army commands to clarify and strengthen LP procedures (Atch #4). On 28 April 1969 and 2 May 1969, AMC policies and procedures were clarified (Atch #5). To further strengthen LP justifications and requests, proposals for LP now require the signature of a general officer (Atch #6).

Recognizing that the current AR 700-20 requires some strengthening the Army is preparing a complete revision which will be published as AR 71-6. Publication of this AR is scheduled for November 1969.

With regard to the specific recommendations in your letter:

- 1. The Marine Corps procurement of the [***] has been reviewed and determination made that although somewhat over currently projected needs, costs for termination do not justify cancellation of contracts. Transfer of 22,500 rounds from Marine Corps to Army to meet projected Army needs is currently in process.
- 2. Although review of LP procurement and production is a continuing effort, special attention is being given to this area. All involved echelons of the Army are conducting a special review and findings will be discussed with the OSD staff.
- 3. The recommendation that MUCOM be required to monitor the use of development items purchased for other customers is not favorably considered. As discussed earlier, the use of an item, developmental or standard, is the prerogative of the using service.

Your recommendations for strengthening and clarifying LP procedures are considered valid. We believe that the actions which have been taken already, and those which are planned in the near future, will

¹See GAO note on p. 32.

serve to significantly improve the management of LP items. All items in this category will continue to receive detailed evaluation by my staff.

The efforts of your staff in this review are to be commended. They have focused on an area that has always merited careful scrutiny which has not always been apparent. We believe that we now have attention focused on LP items at all echelons of management. With this increased attention and the indicated strengthening of procedures we believe that any errors of commission in the past should be avoided or, at the least, minimized.

We appreciate the constructive work you have done in this report and will be pleased to provide any other information which you may require.

Sincerely,

BARRY J. SHILLITO
Assistant Secretary of Defense
(Installations and Logistics)

Attachments 6 [See GAO note.]

GAO note: The attachments are classified and have been withdrawn.

PRINCIPAL OFFICIALS

OF THE DEPARTMENT OF DEFENSE AND

THE DEPARTMENT OF THE ARMY

RESPONSIBLE FOR THE ADMINISTRATION OF ACTIVITIES

DISCUSSED IN THIS REPORT

	Tenure of office				
	From		To		
DEPARTMENT OF DE	FENSE				
SECRETARY OF DEFENSE:	_	1000	Prese	-	
Melvin R. Laird	Jan.				
Clark M. Clifford	Mar.		Feb.		
Robert S. McNamara	Jan.	TAOT	reb.	1900	
UNDER SECRETARY OF DEFENSE:			_	_	
David Packard	Jan.	-	Prese		
Paul H. Nitze	July		Jan.	1969	
Cyrus R. Vence	Jan.	1964	June	1967	
DIRECTOR OF DEFENSE RESEARCH AND ENGINEERING:					
Dr. John S. Foster, Jr.	Oct.	1965	Prese		
Dr. Harold Brown	May	1961	Sept.	1965	
ASSISTANT SECRETARY OF DEFENSE (INSTALLATIONS AND LOGISTICS):	Jan.	1969	Prese	nt	
Barry J. Shillito Thomas D. Morris	Sept	1967	Dec.	1968	
	Dec.		Aug.	1967	
Paul R. Ignatius Thomas D. Morris	Jan.		Dec.		
Induas D. Morris					
DEPARTMENT OF THE ARMY					
SECRETARY OF THE ARMY: Stanley R. Resor Stephan Ailes	July Jan.			ent 1965	

To

Tenure of office

PRINCIPAL OFFICIALS

OF THE DEPARTMENT OF DEFENSE AND

THE DEPARTMENT OF THE ARMY

RESPONSIBLE FOR THE ADMINISTRATION OF ACTIVITIES

DISCUSSED IN THIS REPORT (continued)

DEPARTMENT OF TH	E ARMY	(contin	ued)	
UNDER SECRETARY OF THE ARMY: Thaddeus R. Beal David E. McGeffert Stanley R. Resor Vacant Paul R. Ignatius	Mar. July Mar. Dec. Mar.	1965 1964	Presen Mar. July Mar. Dec.	1969 1965 1965 1964
ASSISTANT SECRETARY OF THE ARMY (RESEARCH AND DEVELOPMENT): Robert L. Johnson Vacant Russel D. O'Neal Willis M. Hawkins Vacant Finn J. Larson	Oct.	1969 1966 1963 1963	Jan. Oct.	1969 1969 1966 1963
ASSISTANT SECRETARY OF THE ARMY (INSTALLATIONS AND LOGISTICS): J. Ronald Fox Vacant Dr. Robert A. Brooks Daniel M. Luevano	June Mar. Oct. July	1965		1969 1969